AMENDMENTS TO THE CLAIMS

1. (currently amended) A method of constructing a data pattern in a bit-error-rate test comprising:

calculating an actual value using selected data of the data pattern;

determining a desired value of the actual-value calculation using the selected data;

determining a correction value to be applied to a portion of the selected data;

performing an operation using the correction value and the portion of the selected data, thereby yielding a replacement value; and

making the portion of the selected data equal to the replacement value, thereby yielding adjusted selected data.

2. (original) The method of claim 1, wherein:

the data pattern comprises a data loop;

the desired value is stored in a first frame of the data loop; and

the actual value is a function of the content of a preceding frame of the data loop.

3. (original) The method of claim 2, wherein the data pattern comprises binary data and the step of determining the correction value comprises performing an exclusive-Or operation of the actual value and the desired value.

4. (original) The method of claim 3, wherein the step of performing the operation comprises performing an exclusive-Or operation of the correction value and the portion of the selected data.

5. (original) The method of claim 4, wherein the data pattern is used for time-domain testing.

6. (original) The method of claim 5, wherein the time-domain testing comprises bit-error-rate testing.

7. (original) The method of claim 4, wherein the data pattern is used for frequency-domain testing.

8. (original) The method of claim 7, wherein the frequency-domain testing comprises spectrum analysis.

9. (original) The method of claim 4, wherein the data pattern comprises at least one Synchronous Optical Network (SONET) frame.

10. (original) The method of claim 9, wherein the step of calculating comprises performing a Bit Interlace Parity (BIP) calculation.

11. (original) The method of claim 10, wherein:

the data pattern comprises at least a last frame and a first frame;

the desired value is stored in the first frame;

the actual value is calculated on the last frame.

12. (original) The method of claim 10, wherein the data pattern comprises a plurality of frames and a plurality of the plurality of frames include identical B bytes.

13. (original) The method of claim 11, wherein the last frame and the first frame are the same frame.

14. (original) The method of claim 10, wherein the desired value comprises at least one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

15. (original) The method of claim 9, wherein the number of frames in the data pattern equals one.

16. (original) The method of claim 4, wherein the data pattern comprises at least one Synchronous Digital Hierarchy (SDH) frame.

17. (original) The method of claim 16, wherein the step of calculating comprises performing a Bit Interlace Parity (BIP) calculation.

18. (original) The method of claim 17, wherein:

the data pattern comprises at least a last frame and a first frame;

the desired value is stored in the first frame;

the actual value is calculated on the last frame.

19. (original) The method of claim 17, wherein the data pattern comprises a plurality of frames and a plurality of the plurality of frames include identical B bytes.

20. (original) The method of claim 18, wherein the last frame and the first frame are the same frame.

21. (original) The method of claim 17, wherein the desired value comprises at least one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

22. (original) The method of claim 1, further comprising:

calculating a second actual value using second selected data of the data pattern;

determining a second desired value of the second-actual-value calculation using the second selected data;

determining a second correction value to be applied to a portion of the second selected data;

performing an operation using the second correction value and the portion of the second selected data, thereby yielding a second replacement value; and

making the portion of the second selected data equal to the second replacement value, thereby yielding adjusted second selected data.

23. (original) The method of claim 22, wherein the step of determining the second correction value comprises performing an exclusive-Or operation of the second actual value and the second desired value.

24. (original) The method of claim 23, wherein the step of performing the operation using the second correction value comprises performing an exclusive-Or operation of the second correction value and the portion of the second selected data.

25. (previously presented) The method of claim 24, wherein the second selected data and the portion of the second selected data are mutually exclusive.

26. (original) The method of claim 1, wherein the selected data is selected from a single frame of the data pattern.

27. (original) The method of claim 1, further comprising calculating an adjusted actual value using the adjusted selected data, wherein the adjusted actual value equals the desired value.

28. (original) The method of claim 1, wherein the step of determining the correction value comprises performing an exclusive-Or operation of the actual value and the desired value.

29. (original) The method of claim 1, wherein the step of performing the operation comprises performing an exclusive-Or operation of the correction value and the portion of the selected data.

30. (original) An error-rate test system comprising:

a pattern generator adapted to input a finite data pattern comprising at least one frame to a device under test, wherein the device under test sequentially processes and outputs data of the input finite data pattern;

wherein a correction value comprises the result of an exclusive-Or operation of an actual value and a desired value of a calculation performed on a selected portion of at least one frame of the finite data pattern;

wherein a replacement value comprises an exclusive-Or operation of the correction value and a portion of the selected portion; and

wherein the portion of the selected portion is made equal to the replacement value.

31. (original) The system of claim 30, wherein the data pattern comprises at least one Synchronous Optical Network (SONET) frame.

32. (original) The system of claim 31, wherein the actual value comprises the result of a Bit Interlace Parity (BIP) calculation.

33. (original) The system of claim 32 wherein:

the data pattern comprises at least a last frame and a first frame;

the desired value is stored in the first frame;

the actual value is calculated on the last frame.

34. (original) The system of claim 30, wherein the data pattern comprises a plurality of frames and a plurality of the plurality of frames include identical B bytes.

35. (original) The system of claim 33, wherein the last frame and the first frame are the same frame.

36. (original) The system of claim 30, wherein the desired value comprises at least one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

37. (original) The system of claim 30, wherein the number of frames in the data pattern equals one.

38. (original) The system of claim 30, wherein the data pattern comprises at least one Synchronous Digital Hierarchy (SDH) frame.

39. (original) The system of claim 38, wherein the actual value comprises the result of a Bit Interlace Parity (BIP) calculation.

40. (original) The system of claim 39, wherein:

the data pattern comprises at least a last frame and a first frame;

the desired value is stored in the first frame;

the actual value is calculated on the last frame.

41. (original) The system of claim 38, wherein the data pattern comprises a plurality of frames and a plurality of the plurality of frames include identical B bytes.

42. (original) The system of claim 40, wherein the last frame and the first frame are the same frame.

43. (original) The system of claim 30, wherein the desired value comprises at least one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

44. (original) The system of claim 30, wherein:

a second actual value is calculated using a second selected portion of the at least one frame;

a second desired value of the second-actual-value calculation is determined using the second selected portion;

a second correction value to be applied to a portion of the second selected portion is determined;

an operation is performed using the second correction value and the portion of the second selected portion, the operation using the second correction value and the portion of the second selected portion yielding a second replacement value; and

the portion of the second selected data is made equal to the second replacement value, thereby yielding an adjusted second selected portion.

45. (original) The system of claim 44, wherein the determination of the second correction value comprises performing an exclusive-Or operation of the second actual value and the second desired value.

46. (original) The system of claim 45, wherein the operation using the second correction value and the portion of the second selected portion comprises performing an exclusive-Or operation of the second correction value and the portion of the second selected portion.

47. (original) The system of claim 46, wherein the selected portion and the portion of the second selected portion are mutually exclusive.

48. (original) The system of claim 30, wherein the selected portion is selected from a single frame of the data pattern.

49. (original) The system of claim 30, wherein an adjusted actual value using the adjusted selected data is calculated and the adjusted actual value equals the desired value.